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ABSTRACT

Educational research has provided evidence about the effectiveness of small classes. Overall, research suggests that teachers in small classes find more time for individualized instruction, and that they find more opportunities for enrichment and curriculum changes. Most of the changes seem to have occurred because easing the constraints of a large class allowed the teacher to do what he or she was already inclined to do to improve instruction. The experiences of educators in Burke County (North Carolina) illustrate the advantages of classes of 16 to 18 students in the primary grades. Among other advantages is the ease of implementing a portfolio assessment process. Observations and quantitative data support the expressed opinions of teachers that small classes have many advantages. (Contains 5 tables, 2 figures, and 14 references.) (SLD)

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TEACHING IN SMALL CLASSES: WHAT IS THE DIFFERENCE?

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by

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Teaching in Small Classes: What is the Difference?*

In 1979, just one year after Glass and Smith (1978) developed their curve or graph of the relationship between class size and student academic achievement, Cahen and Filby (1979) noted that Glass and Smith did not make

> . . . any attempt to see how this relationship is conditioned by a set of variables we shall call quality of instruction. It would be useful to find out whether, and how, good and poor teaching or environmental conditions alter the curve (p. 493).

Questions that Cahen and Filby posed are still awaiting answers today. Even though the research shows that class size, per se, influences student outcomes positively, the variables of good or poor teaching, of environment or context, (other than class size), and of curriculum or content should add to or detract from the positive benefits of class size.

Cahen and Filby described a field study that was in process at that time to try to find out what teachers did differently in small and in large classes. In that study, two regular second-grade classes were established. At mid-year, a third teacher received students from each class, making three small classes each taught by one teacher. Researchers and the teachers studied the classes to find out what was different. This study was important because, as Cahen and Filby (1979) noted, "many people have suggested that reducing class size will have no effect if teachers do exactly the same thing in a small class as in a large one. . . " (p. 494). In the 1990's this same idea was reflected in comments that students would learn more in a large class with a good teacher than in a small class with a poor teacher. (Where is the correct comparison of small class with food and poor teaching?) Research has substantiated a class-size effect and people know exactly what to do to get the effect—just reduce the class size. There is far less certainly on exactly what makes a good teacher and even less is known about exactly how to make a good teacher either through preservice or inservice training. A better question might be "How much more will students learn with a good teacher and a small class than with that same good teacher in a large class?"

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The teachers in that field study just described did pretty much the same things in the small and in the large-class conditions. What did change was the quantity and the quality of what they were doing before the class-size change. In the small class they were able to introduce more topics or cover more content, but most "changes" were only modifications of existing processes, and not radical or new approaches. That conclusion about teaching in small classes is reinforced by the materials in the next sections.

> The teachers welcomed the opportunity for greater individualization of instruction. Changes in curriculum also occurred, most in the form of enrichment activities such as more instructional games, reading for pleasure, and field trips. Within the basic reading and mathematics curriculum, some teachers found that students completed lessons and progressed through the curriculum more quickly. Other teachers developed lessons in greater depth. While the teachers expressed a sense of greater freedom from the constraints imposed by a large class and increased enthusiasm, it appeared that easing these constraints allowed the teachers to do what they were already inclined to do in a better fashion. Most of the changes could be described as modifications or improvements within the teachers' existing styles and plans of instruction. Filby et al. (ED 219365). (Emphasis added).

Environmental Conditions: Class Size as Context

The most readily evident change in the environmental conditions that Cahen and Filby ask about is the class size itself. This is a true observed difference. A class-size change does "alter the curve" discussed by Glass and Smith (1978). The class is an environmental condition for the teacher, for each student, and for groups of students. The classroom is the context for the class, including the teacher. Holding time of day, available materials, and space, i.e., square (or cubic) footage of the classroom constant, a reduction in class size from 30 students and one teacher (30:1) to 15:1 immediately influences environmental variables such as space and fresh air per occupant, crowdedness, amount of materials per pupil, noise levels, and teacher time for each student. Research has shown that space (e.g., personal, public, private space) and space relationships influence animal behavior, including human behavior (Hall, 1966). In the present example of a change from 31:1 to 15:1, each student has about twice as much space (material or toys, too) and potentially twice as much individual teacher time in 15:1 as in 30:1: Noise levels, air quality, use of diverse teaching stations (etc.) would be improved in 15:1 classes and these environmental conditions—brought about with no effort other than small classes—will influence student outcomes.

> ☺ A second-grade teacher explained that although her class this past year had a reputation as the "class from hell," she's been far more able to deal with problems. Relationships are closer. There are fewer arguments and more warmer feelings coupled with genuine friendships with parents and children. As she explained, "I always feel a bit sad when it's time to say goodbye in June. This year I felt like crying."

Results of Some Observations of Small-Class Teaching

Data in the following tables show results of observations conducted in small classes, or comparisons of observations in smaller and in larger classes, and offer an initial summary of those observations. Table 1 is a synopsis of early classroom observations done by Olson, as reported in Cavenaugh in Educational Alternatives, (1995). Table 2 includes a listing of teacher behaviors and resultant student benefits from Project SAGE in Wisconsin (Molnar, 1998). Table 3 shows some small-class benefits compiled by Cooper (1989), based primarily on earlier reviews and composed prior to the availability of STAR results.

Oak Hill Elementary, High Point, North Carolina undertook "Project Success." The class size was based on 15:1 with no full-time teacher assistant and an agreement with teachers to teach using more hands-on learning strategies and to teach for higher-level thinking. Four first-grade teachers provided the information. After the same teachers had taught in both 15:1 and 26:1 settings, Dr. Jean Owen, the principal who had made the small-classes possible, interviewed the teachers and summarized their comments (Table 4).

Several researchers have synthesized benefits of a teacher having small class sizes. The consistency of the findings across the studies will not surprise any parent, or person who has taught or been in schools and observed children closely, or who has thought seriously about small classes. Olson's succinct comparisons (Table 1) really summarize and encapsulate results shown in Tables 2 and 3, also. The division into student and teacher benefits makes clear the reciprocal and similar benefits for both students and teachers, hardly surprising if they were in the same rooms at the same time and if teaching and learning are reciprocal events.

Olson's results illustrate possible reasons why class-size research continues to show a class-size effect for student outcomes, and why the near hysterical focus upon test-score achievement vastly understates the value of small classes. Olson's summary shows positive cognitive, behavior and affective outcomes: improved test results, improved behavior, and improved attitudes. Olson described benefits for teachers and for students that are

complementary. For example, both teacher and student attitudes are improved in small classes. Teachers report that in small classes there is better discipline, and classroom management is less troublesome, but these positive teacher perceptions are undoubtedly the reciprocal of students who work comfortably in groups and display good human relations skills. Teachers and students help each other, and the learning environment changes.

TABLE 1 ABOUT HERE

The narratives in Table 2 express observations of evaluators in Project SAGE in Wisconsin. The refrain is familiar: better classroom management, active instruction, individual attention, and lots of time on task (Molnar, 1998). These events describe what research, theory, and exemplary practice have shown to be important for improved student test-score performance. SAGE small-class students achieved better than their large-class comparison groups.

TABLE 2 ABOUT HERE

Cooper (1989) summarized small-class benefits as non-achievement and achievement outcomes. His portrayals strengthen the idea that small classes are not only production centers for higher test outcomes. Although Table 3 lists differences as teacher benefits, there is hand-in-glove correspondence between improved teacher outcomes such as morale and attitude and what teachers are able to do: individualization, positive class climate, etc.

TABLE 3 ABOUT HERE

What do teachers say about the differences that they perceive in classes of 15:1 and 25:1? One way to find out, is to interview teachers who have taught in both settings. Since small classes are the change that educators are striving toward, such as the California Class-Size Reduction (CSR) effort, most interviewers would ask teachers how current small classes differ from prior large classes. Many stories of teaching have that time orientation. Project Success in High Point, North Carolina reversed the expected time sequence. Teachers there commented on small classes while teaching large classes after their small-class experiences.

The small-class to large-class "before-after" teacher analyses in Project Success are on the one hand refreshing because they reverse the usual large-

to-small shift. They are also saddening because they represent a move away from the desired outcomes of schooling. The reader can feel the teacher frustration and hurt, an all-to-common feeling of many teachers when they are unable to reach each child.

Table 4 includes the before-after teacher comments divided into two sections. Section A has 17 entries about teaching in small classes. Overwhelmingly, these statements are characterized by "more," not by "different"—unless the definition of different includes more of the same. And it might. Enough "more" suggests that there is some corresponding "less." Is the new "more-less" mix enough to provide a different learning environment?

Section B of Table 4 includes 12 entries about teaching in classes of 24-26 students. Overwhelmingly, these teacher observations reflect frustration, diminuation of positive teaching efforts, reductions in individual attention or in student productions. The items in sections A and B deserve careful analysis and contrast. The differences tell their own story of quality teaching.

TABLE 4 ABOUT HERE

Themes reported in the Tables 1-4 reinforce each other. Teachers in small classes consistently report being able to do what they believe is needed to help students learn. Some observers have confirmed that in small classes teachers do more of what they already know to do. Teacher self-report may include more wish than fact about teaching differently, and researchers have reported fewer observed differences or changes than teachers themselves report (e.g., Filby et al., 1980; Shapson et al., 1980). How does this idea play out? The next section includes discussion of teacher behaviors that were collected by observations of teachers in small and in large classes.

> ☺ The lower class size has been very rewarding for me this year. I have been able to meet student needs better and believe that I know my students better individually. There is a marked decrease in discipline problems in the small classes , the group members are very nurturing and supportive to one another's needs. Students take more personal responsibility for the class.

A Structured Observation Study: Success Starts Small or SSS

In 1993-1994 we conducted a year-long observation study of teaching behaviors of teachers in small classes ("Life in a Small Class" or "Success

Starts Small") and of teaching behaviors of teachers in regular classes of about 24 students or 24:1 (Achilles et al., 1994; Kiser-Kling, 1995). The small classes had about 14 students (14:1). We observed in two schools selected nearly identical on key variables (school size, student race, SES, prior-year student performance, teacher experience, etc.). Both sites had school-wide Title I funds. School A had small classes. School B used a traditional approach to deliver Title I services through projects and pull-out activities.

Two graduate students who had 4 and 8 years of experience in early elementary teaching and one professor observed the teachers and recorded results on an instrument called the PIT (French & Galloway, 1970) which allowed researchers to sort teacher behaviors into four categories called Personal (P), Institutional (I), and Task (T), communications, and a category called "mixed" (M). Most of the recorded behaviors were (T) or task that described "time-on-task" in the classroom. The next highest category was (I) or Institutional. The (I) behaviors describe "playing school"—lining up, most discipline, situations, transitions, classroom management. We recorded behaviors about every 5-7 seconds for snapshots of 10-20 minutes of class interactions after we had established inter-rater agreements (over 90% for this study). We observed teachers teaching the same subjects, at about the same time of day and year (fall to spring) and collected over 7000 samples of teacher behaviors. We aggregated these observations from the single teachers into the two groups of teachers of interest: small (14:1) and regular (24:1). We compared behaviors and outcomes of the two groups.

We also collected context information, such as room size, use of aides or/and volunteers, grouping for instruction, referrals to the office for indiscipline, etc. As a standard outcome measure and to meet Title I requirements we obtained pre (fall, 1993) and post (spring, 1994) matched-pair test-score data on students in grade 1. Students in both schools had experienced kindergarten or some similar pre-school time.

By dividing teacher classroom communications to students into four categories allowed us to determine if there were differences in the percentages of teacher time-on-task events in classrooms of 14:1 and of 24:1, and if such behaviors changed throughout the school year. Observation were made primarily in first-grade classrooms (4 rooms of 14:1 and 2 rooms of 24:1) and secondarily for context in K and grade-2 classrooms in both schools. As shown in Figures 1 and 2 teachers in both large and small classes started the school year with about the same amount of on-task behaviors. As the year progressed, the average time on task (the T behaviors in the PIT system) changed in the different-sized classrooms. Teachers in large classes decreased the time on task and teachers in small classes increased the time on task between October and April, both in the target first grades (Figure 1) and in the K and grade 2 classes throughout the two schools. (Figure 2). Students in the small classes outperformed students in large classes on test

score gains pre to post ($p \leq .01$) and reduced their discipline problems by one-half as they experienced the small classes.

A major reason for the achievement gain found in small classes is clearly the increase in time on task (the PIT category designated as T) in 15:1 classes from about 80% in the Fall to about 88% in the Spring. Teacher time on Task in classes of 24:1 declined from about 80% in the Fall to about 65% in the Spring, at the very time that the students were tested. As recorded by the observers, this time-on-task difference translated into a purposeful, busy but calm classroom of 14:1—Project Success teachers reported a "sense of peacefulness in the class"—when compared to a hectic, frustrating class as teachers in 24:1 tried to rush students to know the basics for upcoming tests. In the 14:1 classes, teachers had already ascertained that their students were prepared for the tests, so they could use time for enrichment or review, absent the pressure to cover more material at the last minute. The tone or climate in the classes of 24:1 was harried and hurried; in the classes of 14:1 it was calm and focused.

FIGURES 1 and 2 ABOUT HERE

Other information and inferences can be developed from the single data set provided in Figure 1 or in Figure 2, or by considering the data in Figures 1 and 2 together. From modest clinical observation such as this, a researcher can design studies that can, perhaps, lead to clearer understandings of why students in smaller classes generally outperform students in larger classes.

Findings from the SSS study, either in comparison between classes of 24:1 and 14:1 in matched buildings, or in comparison of 14:1 (1994) with 24:1 (1992 and 1993) in the same building (Project Success, Table 4) show positive observation, test-score, and behavior differences, favoring students and teachers in 1:14 vs. 1:24 class settings.

Small Class Lessons from Burke County, Teachers

Burke County, North Carolina educators began small classes on a pilot basis and then expanded the program so all students in grades 1-3 were in classes of 16-18 students per teacher. Over the years of the small-class implementation, the teachers have cooperated and shared successful teaching practices. Because of the small numbers of students in each class, teachers could individualize much of their instruction and use student portfolios as a teaching strategy, a way to monitor student performance and growth, and a centerpiece for involving parents. The teacher uses of the portfolio in Burke County shows how small classes facilitate improved teaching and learning.

A small class gives the teacher time and space to teach well. Small classes trigger changes in categories of schooling activities: teachers can expect the following positive outcomes in classroom management, in parent interest in school, and in curriculum and instruction. Burke County teachers provided these examples.

Selected Positive Aspects of Teaching in 18:1 Classes

- Individualize programs for students on their levels
- Reading instruction is more varied and successful
- Increased time-on-task
    - Individual reading time, daily;
    - Reading logs, with time to monitor student growth;
    - Accelerated reader program;
    - "Book Buddies."
- Teachers can monitor and use volunteers well
- Teachers can bond with each student and increase one-on-one student contact
- Greater expectations and accountability at all levels

Parental Interest and Involvement in School Increase or Improve

- Frequent parent conferences and high attendance at parent meetings, such as at report card pick-up
- Newsletters (Each teacher sends a newsletter home 2-3 times each year)
- Parental involvement in classrooms, often as volunteers.
- Increase in Parent-Teacher Organization (PTO) attendance
- Pupil self-esteem is elevated by the "community" in rooms.

Classroom Management:

- Many fewer behavior problems in small classes
- Stronger peer relations in small classes
- Environment and space are safe and conducive for learning
- Small-group instruction is more manageable than in larger classes

Changes or Increases in Curriculum and Instruction, such as:

- Frequent individual reading and writing conferences are possible

- More hands-on activities, especially in math and science
- Teachers can use inventories to monitor students' active learning.
- Observable increases in computer lab/media, interest and use.
- Establish a pattern of early success in school
- Added portfolio use improves the alternative and authentic assessment of student growth

Portfolio Process as Example of Small-Class Benefit

When used properly, the portfolio process is time-consuming and individual-intensive. In a small class, a teacher can use a portfolio not only to collect and display student work, but also as a teaching tool and communication bridge with the home. Small classes afford the time and space for working on and storing the portfolio. The portfolio process is an important part of instruction, and several teachers from Hillcrest Elementary School in Burke County shared some of their ideas about portfolios in a small class. Observations in small classes in the Clovis (CA) schools provided results similar to those reported here.

Basic Steps to Portfolio Assessment

- Decide what language arts, math, and other competencies are most important to you and to your students.
- Determine specific tasks to demonstrate the important competencies.
- Define standards of student performance.
- Implement a method for managing the portfolios.
- Evaluate the portfolios at regular intervals, jointly with students (and parents).

What Do Students Include In Their Portfolios?

A portfolio can contain whatever the student chooses, but should include work samples that show student progress in basic skills and in development of higher-order skills. The small-class setting affords the student and teacher time to establish two portfolios, if they choose, or at least to divide one portfolio into two major sections: The Process-folio and the Product-folio.

Selection of material for a portfolio can be completely open-ended, limited only by the physical dimensions of the portfolio, storage constraints, and time to determine "the rules" with the students. Contents that have been used successfully include:

- Questions, issues, brainstorming, notes associated with research projects
- Sketches, semantic maps
- Photographs
- Writing samples, rough drafts, works in progress
- Published "books"
- Peer and teacher feedback, and the student's reflection on peer and teacher feedback
- Lists of books read and student comments about the books
- With whom the student shared the books
- Audiotapes of the student reading: Perhaps record readings once a month or so and include the student's self-evaluation of the reading
- Literature logs
- Student personal reactions to classroom experiences and self-evaluations

Encourage each student to review his/her portfolio at specific times to assess the work and to think about personal growth and achievement. A student "Portfolio Self-Evaluation" worksheet (see Table 5) will help the student in maintaining a "portfolio process' and will guide reviews of the student's work. Reviews can also be a part of parent, teacher, and student conferences.

TABLE 5 ABOUT HERE

With a class of 28-30 children many aspects of good teaching, especially the time-consuming individualization required in using the portfolio process as the heart of instruction, are not manageable. Whether a teacher uses portfolios or some other individualization process, the small class makes teaching and learning a more meaningful and productive event; large classes hinder teachers from doing what they know how to do.

The teacher comments about benefits of small classes and the outcomes of a small class tell a story of teachers being able to teach and to do what successful teachers in STAR and in SAGE and in Olson's review all did: individual attention, work with each child, use the advantages of space, and the opportunity to work with troubled students vs., generally not being able to do those things. The benefits expressed by teachers were confirmed by statistically higher test scores, fewer discipline cases sent to the office (reduced by 50%), by improved parent relations, and in other ways.

> ☺ The mutual respect between students and teacher was stronger than I have ever seen it. My students showed very positive gains in academics and in their computer skills. I was pleased to have more "quality" time to spend with my low achievers, as well as with my high achievers. Discipline problems were non-existent. Students and teachers loved the small classes.

Teachers in North Carolina told the same stories over and over. At a workshop on small-class instruction held in June, 1998, teachers of small classes reported on their perceptions of small-class benefits. The consistency of their responses serves as an estimate of reliability not only internally for this group, but also externally when compared to results of studies and anecdotes from small-class teachers in other states.

☺ "The main advantage is being able to work one-to-one with more students. It helps maintain better discipline and students work as a family unit."

☺ "With fewer students, I can get to know a students' weaknesses and strengths quickly, and begin to address them."

☺ "More individual help to students.

- More personal relationships.
- Can build self-esteem.
- Improved discipline.
- More time for fun learning activities."

☺ "More time for individual help.

- More opportunity to use technology.
- More time for communication with parents about their child's progress.
- Peer tutoring.

☺ "Small-class size enables me to get to know each student better, and to provide for the individual needs of the students."

☺ "Smaller classes for me have provided important benefits:

- Closer personal relationship with students/parents.
- More time for individual help.
- Time for whole-group, small-group, and individual reading classes."

- "Small classes allow me much more time for working with small groups and particularly for working closely with the students who require individualized instruction and individual attention."
- "Reduced class size has allowed me to engage my students in more active learning activities. There is more room and more time for dyad or small-group activities. Student's projects have improved because there are enough materials for everyone. I have enjoyed individual conferences with my students about their progress also. There is more of a "family feeling" within my class."

Summary and Conclusions

Bain, et al. (1992) summarized advantages of the small-class condition as expressed by the teachers in Project STAR (Word et al., 1990). That summary expresses the general differences that teachers find between teaching in larger and in smaller classes. The class-size "differences" they expressed are really more of the same. Is "more" really different.

> A common benefit cited by teachers in small and regular-plus-aide classes was that they were better able to individualize instruction. These teachers reported increased monitoring of student behavior and learning, opportunities for more immediate and more individualized reteaching, more enrichment, more frequent interactions with each child, a better match between each child's ability and the instructional opportunities provided, a more detailed knowledge of each child's needs as a learner, and more time to meet individual learners' needs using a variety of instructional approaches (p. 254).

Note that this paper does not include details about teaching in small and large classes that were found in Project STAR (Word et al., 1990). The extensive STAR results that confirm experimentally material reported here are provided in a separate paper.

The stories of teachers of small classes today express just what reviews of early class-size studies found. Observations and quantitative data support both. Let's get on with it!

Table 1. Nine defensible generalizations about class size when teachers have fewer rather than more students.

1. Teachers employ a wider variety of instructional strategies, methods and learning activities and are more effective with them;
2. Teacher attitudes and morale are more positive;
3. Classroom management and discipline are better;
4. Students benefit from more individual instruction;
5. Students develop better human relations and have greater regard for others;
6. Students learn the basic skills better and master more subject matter content;
7. Students engaged in more creative and divergent thinking processes;
8. Students learn how to function more effectively as members and leaders of groups of varying sizes and purposes;
9. Student attitudes and perceptions are more positive.

Source: Dr. Martin Olson

From Cavenaugh, R. (1984, March). Class size and best practice. Education Alternatives. 3. Dr. Martin Olson's breakthrough study in USA nearly 30 years ago focused on the impact of different class size groupings.

Table 2. Findings on Teaching Characteristics in Small Classes in Project SAGE (Molnar, 1998, p. 37).

In their qualitative research, evaluators found that in SAGE classrooms:

1) Little time is required to manage the class or to deal with discipline problems;

2) Much time is spent on instruction, actively teaching;

3) A large portion of instruction is individualized and spent in diagnosing student needs, providing help, and in monitoring progress; and

4) Students showed increases in "on task" and "active learning" behaviors over the year. • These behaviors were also found to be related to SAGE student performance on the CTBS.

In general, the first-year SAGE results appear to be tracking the results of the STAR study.

• This finding is similar to the increase in time-on-task found in Success Starts Small (SSS) in North Carolina.

Table 3. Summary and Paraphrase of Teacher Benefits, from Cooper (1989 pp. 85-87) *.

Non-Achievement Variables (That May Affect Achievement)

(25 of 30 Comparisons Favored Small)

A) TEACHER VARIABLES (In Small Classes) there was:

- Higher Teacher Morale
- Improved Attitude Toward Students
- Satisfaction with Performance are Better

B) INSTRUCTION (In small Classes) there was

- More Individualization and Informality
- Higher Quality Instruction
- Positive Climate

[*Cooper cited key meta-analyses and other studies in deriving the conclusion: E.g., Glass and Smith 1978, ERS (1978,1980), Glass et al., (1982)].

These prior findings from Meta-analyses and reviews were later obtained experimentally in STAR and STAR-related studies (e.g., SSS Study in NC).

Table 4 Project Success-Progress Report (3/17/93)

A. Immediate observable outcomes of class size of 15:

1. More individual attention
2. More personal space for each student
3. More personal teacher-student conversations
4. More time to diagnose how the students are thinking and to determine their understandings and misunderstandings
5. More time to diagnose and develop their most successful learning style
6. More time to get to know each student and their families - a message to parents that teacher really cares because she knows all about us
7. More time for students to get to know each other
8. More time for teacher to develop sense of community among classmates, connect her students with other big sister/big brother classes in the school
9. More students reading on more advanced levels.
10. More students understanding math concepts, not simply writing numbers and number facts
11. All students participating in "Seminars" discussing literature on their level, making concept connections and thinking about human values
12. More self confidence for learning regardless of abilities
13. Wider range of abilities able to learn together (fewer referrals out during these critical early years)
14. More time and space to develop hands on/student initiated learning rather than relying on mostly didactic, teacher controlled learning
15. More time to give "troubled kids" the attention they so desperately need, reducing greatly the likelihood of their becoming a discipline problem
16. More energy for collegial planning that led to well thought out, creative "webbing" thematic lessons
17. A sense of peacefulness in the class

Table 4 (continued)

B. Immediate Observable Outcomes of Class Size of 24:

1. I cannot meet all subject needs daily.
2. I used to have daily reading conferences. Now I read individually with each child about two times weekly.
3. I feel frustrated that in the critical first grade year, I cannot assess their reading individually and specify the focus they need.
4. They used to read to me every day. They still want to and it seems to hurt their feelings if they can't.
5. This at-risk population needs daily help. I want to give that help but can't get to them as often as they need.
6. I don't know the children as well.
7. During each lesson now, each child does not get to answer. Last year, each child answered three and four times in each lesson.
8. Lessons are 15 to 25 minutes longer as I check-all children. I do more "up front" teaching. This leaves little time for students to do the independent exploratory learning and thinking.
9. There are more student conflicts in the classroom.
10. There is less space for each child.
11. I have to move on before all students have learned. Last year I could make sure every children did and learned what he or she was supposed to.
12. Students do not present their work orally as much. Oral communication is a major need, but the class size keeps us from doing it as much.

Table 5. Sample of a Portfolio Self-Evaluation Form.

Name_____ Date_____

PORTFOLIO SELF-EVALUATION

1. Put your best portfolio piece on top in your folder. What makes this your best piece?

   _____

   _____

2. List some other items that your portfolio contains:

   _____

   _____

3. Overall would you say that your portfolio contains your best work?
   Yes___ No___ Why? Why not?

   _____

   _____

4. If you could start over, how might you work differently on your portfolio?

   _____

   _____

5. What letter grade would you give for your portfolio? _____

   Why?. _____

   _____

6. What goal for your portfolio will you set for next quarter?

   _____

   _____

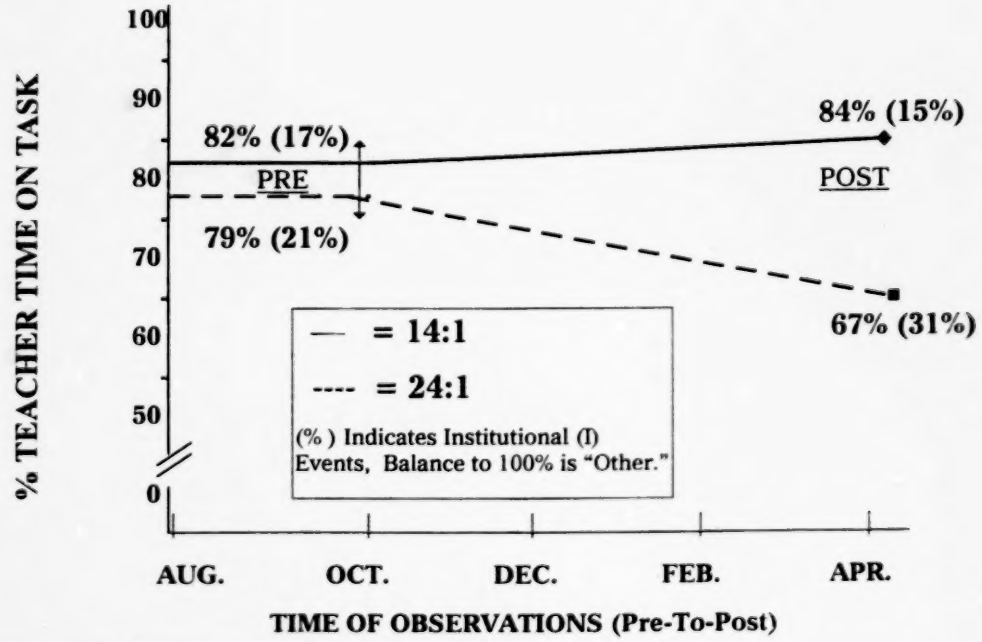

FIGURE 1. Teacher Time on Task in Two First-Grade Class Conditions: (14:1 and 24:1)*
* From Kiser-Kling, (1995), p. 64, Table 15.

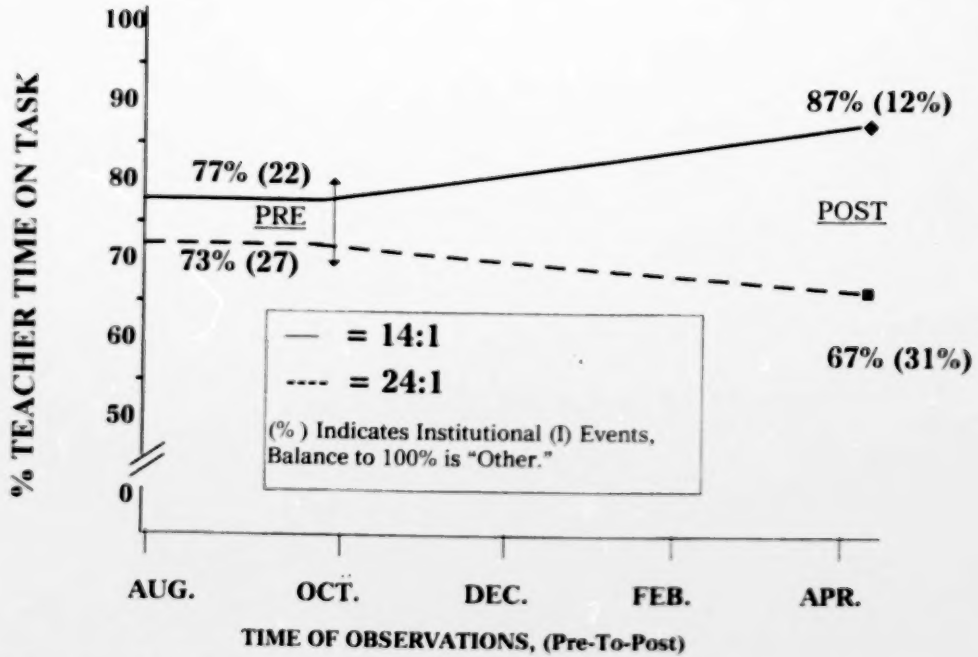

Figure 2. Approximate Teacher Time on Task in Two Class Conditions: (14:1 and 24:1), School-Level K-3*
* From Achilles et al., (1994), and Kiser-Kling (1995) .

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